1997 - ODES Data Submittal

Municipality of Anchorage
Anchorage Water & Wastewater Utility
Pt. Woronzof WWTF
NPDES Permit AK-002255-1

SONY

ANCHORAGE WATER & WASTEWATER UTILITY

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Rick Mystrom,
Mayor

April 9, 1998

Owned by the
Municipality of Anchorage

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Phil Millam, Director
Water Division, OW 131
U. S. EPA, Region 10
1200 Sixth Avenue
Seattle, WA 98101

Re: Anchorage Pt. Woronzof Monitoring Program
NPDES Permit AD-002255-A
ODES Data Submittal

Dear Mr. Millam:

Enclosed is a disk containing copies of the ODES data for in-plant influent, effluent, and sludge daily and summer wet-dry monitoring, and receiving water quality and bacteriological monitoring for the period October, 1996 through September, 1997. Also enclosed is a hard copy of the description questionnaire containing additional information about the submittal.

If you have any questions, or need additional copies, please call me at 907-267-4510.

Sincerely,

Robert L. LeVar
Manager, Treatment Division
AWWU

cc w/encl.: Robert Dolan, Environmental Engineer, ADEC, Anchorage

cc w/o encl.: Chief, Compliance Section, EPA, Seattle
Valerie Haney, EPA, Anchorage
Mark Premo, P.E., General Manager, AWWU
Mark Spano, Laboratory Supervisor, AWWU

DESCRIPTION OF INFLUENT/EFFLUENT DATA SUBMITTED TO ODES

Because of the many types and sources of data that may be added to ODES, it is of great value for users to know the goals and techniques of each sampling program. Much of this information, so valuable for interpretation of data, is not inherent in the data itself; it can only be supplied in narrative form. Each data submitter is therefore requested to provide a descriptive overview of the sampling program. The following questions are intended to indicate the important issues which affect a data set's use and it's comparability to other data sets. The information supplied in response to these questions will help all ODES users choose data appropriate for their purposes. Answers for the following questions are requested for each influent/effluent file submitted for addition to ODES. Please attach extra pages, as necessary. If the requested information is available in annual or quarterly monitoring reports, these may also be submitted.

Data Set ID#: M96EFLQ4.ODS   M97EFLQ1.ODS   File Type: __144E__
            M97EFLQ2.ODS   M97EFLQ3.ODS
            MOA97DRY.ODS   MOA97WET.ODS

Submitter: _Municipality of Anchorage- Anchorage Water & Wastewater Utility_

Please give the name of an individual who can be contacted for additional information concerning this data set:

Mark A. Savoie
Kinnetic Laboratories, Inc.
403 West 8th Avenue
Anchorage, Alaska 99501-3515
(907) 276-6178

1.   If you have utilized the Series identification field to define subsets of your data, please provide a description of the code used and its definition. If more than one Series ID was used, provide information for all codes.

    The Series identification field was not used.

2.   Please describe the goals of the sampling program.

    The objective of influent, effluent, and sludge monitoring is to characterize the nature and concentrations of pollutants in wastewater and treated wastewater, thereby providing data for monitoring plant performance.

3. Please describe the equipment and techniques used for sample collection, in particular, the use of composite and grab samples for particular types of analyses is important to note. Please confirm the frequency and duration of composite sample collection.

24 hour flow composite samples were taken for daily influent and effluent analyses performed by the Point Woronzof laboratory. The unit used for flow composite sampling was an ISCO Model 3700 FR autosampler. Daily sludge analyses were performed on a composite of three grab samples of dewatered sludge taken every 8 hours.

Analyses for the Summer-dry and Summer-wet sampling were performed as follows: 1). 24-hour composite samples consisting of 180 mL grab samples of influent and effluent water collected every 30-minutes were analyzed for pesticides (EPA 608 and 614). 2).24-hour composite samples consisting of 3grabs (every 8 hr.) of influent and effluent water were analyzed for cyanide. 3). 24-hour composite samples consisting of 8-40ml VOA vials (every 3 hrs.) of influent and effluent water were composited in the laboratory and analyzed for purgeables (EPA 624). 4). One 40-ml VOA vial of influent and effluent water was analyzed for hydrocarbons (EPA 602) . 5). One 2-L grab sample of influent and effluent water was analyzed for Oil and Grease, Total Hydrocarbons as Oil and Grease and Total Petroleum Hydrocarbons. 6.) Composites of 24 one hour grab samples of about 100ml of dewatered sludge.

4. How were samples handled during transportation and storage?

Samples were refrigerated prior to shipping. Samples were shipped to analytical laboratories in coolers with ice packs. Chain of custody forms were utilized for all samples. Adherence to holding times was observed.

5. Were field and transport blanks collected and analyzed?

A field sample blank and a trip blank were collected and analyzed for volatile organics by EPA method 624.

6. What component of the sample was analyzed, i.e., whole water, dissolved fraction, or suspended particulate? If whole water was fractioned into suspended and dissolved parts, what filter size was used?

Whole water samples were analyzed.

7. Please provide the following information on analytical techniques for each class of

chemical compounds. (Please attach on a separate sheet).

Analyte	Sample Size	Container Type and Preparation	Sample Preservation	Holding Time Range	Method	Instrumentation	Detection Limits

This data is already incorporated in the ODES data set for each chemical compound. For further information please consult Table 3 and Appendices A,B, and E of the Monitoring Program Annual Report.

8. Please provide the following information on the frequency of laboratory quality control checks and provide a copy of the results of any such analyses. (Please attach information on a separate sheet)

Analyte	No. of Samples	No. of Duplicates	No. of Blanks	Matrix Spike			Analytical Standards	
				Number	Material	Amount	Number	Material Used

This information may be found in the Quality Assurance Manuals and Statement of Qualifications of the analytical laboratories used in this monitoring program. This material was mailed to Tetra Tech on 11 June 1991. For further information please consult Appendices A, B, and E of the Monitoring Program Annual Report.

9. If results submitted to ODES have been corrected for blanks or recovery response, please describe the manner in which this has been done.

Concentrations of metals, cyanide, total residual chlorine, and oil and grease, monitored monthly by the Point Woronzof laboratory have been background subtracted (subtraction of method blank).

Blank and recovery response data are contained in sets beginning with the 'Z' record type. 'F' record fields 84-86, 87-89, and 90-92 are used to tie sample data to method blank, surrogate, spike, and duplicate quality assurance data.

10. Please describe any features of this data set which may affect its use to generally characterize environmental data.

1) Sludge matrix spikes for EPA 8240 and 8270 were run on two days bracketing the date of actual sample extraction.

2) The surrogates for EPA 8270 analysis of the sludge sample were not reported due

to overdilution during analysis.

3) *Sample data with alphanumeric designations IN, EF, and SL indicates sample analysis by laboratories other than the Point Woronzof laboratory.*

4) *The following Chemical Codes were used to substitute for unavailable ODES CHEMCODES (pending eventual replacement with genuine ones):*

D-Limonene	Code1
Tridecane	Code2
Benzene, (1-methylethyl)-	Code3
Formic acid	Code4
7-Oxabicyclo[2.2.1]heptane, 1-methyl	Code5
Benzene, 1-ethyl-2,3-dimethyl-	Code6
Decanal	Code7
Tetradecane, 4-ethyl-	Code8
Decane	Code9
Ethanol, 2-(2-butoxy	Code10
3,7,11-Tridecatriene	Code11
Cyclohexadecane	Code12
6,10,14-Hexadecatrien-1-ol,3,7,11	Code13
Oleic acid, eicosyl ester	Code14
Decachlorobiphenyl	Code15
1,4-Difluorobenzene	Code16
a,a,a-Triflourotoluene	Code17
d10-Phenathrene	Code18
d12-Chrysene	Code19

11. Please describe the quality assurance/quality control procedures used to verify the correct coding and entry of data.

Daily monitoring data was double-keypunched and verified. Data for the July and August Summer-dry/Summer-wet samplings was double-checked against laboratory data sheets.

12. If any other types of data were collected concurrently which have been or will be added to ODES, please indicate the appropriate ODES file type(s).

File types AN144W and AN009.

13. In what report or document can the raw data be found? How could an individual obtain a copy of the raw data?

Monitoring Program Annual Report, November 1996- October 1997, Anchorage Water and Wastewater Utility, Point Woronzof Wastewater Treatment Facility.

DESCRIPTION OF RECEIVING WATER DATA SUBMITTED TO ODES

Because of the many types and sources of data that may be added to ODES, it is of great value for users to know the goals and techniques of each sampling program. Much of this information, so valuable for interpretation of data, is not inherent in the data itself; it can only be supplied in narrative form. Each data submitter is therefore requested to provide a descriptive overview of the sampling program. The following questions are intended to indicate the important issues which affect a data set's use and it's comparability to other data sets. The information supplied in response to these questions will help all ODES users choose data appropriate for their purposes. Answers of the following questions are requested for each set of benthic data submitted for addition to ODES. Please attach extra pages as necessary. If the requested information is available in annual or quarterly monitoring reports, these may also be submitted.

Data set ID#: MOA97RWQ.ODS File Type: 144W

Submitter: Municipality of Anchorage- Anchorage Water & Wastewater Utility

Please give the name of an individual who can be contacted for additional information concerning this data set:

Mark Savoie
Kinnetic Laboratories, Inc.
403 West 8th Avenue
Anchorage, AK 99501
(907) 276-6178

1. If you have utilized the Series identification field to define subsets of your data, please provide a description of the code used and its definition. If more than one Series ID was used, provide information for all codes.

   none

2. Please describe the goals of the sampling program.

   Determine compliance with applicable State and Federal water quality standards.

3. Please describe the distribution of the sampling stations throughout the water body sampled. If stations were selected in order to characterize some particular feature (e.g., an effluent source), please identify this feature and present the rationale for the placement of stations in relation to this feature.

   Plume dispersion via periodic sampling at drogue drift stations.

4.	Please describe the gear, any special features of its application and techniques used for sample collection.

Cylindrical-shape drogues, Niskin bottles, CTD casts.

5.	How were samples collected and handled during transportation? How were samples stored?

Samples were collected in Niskin bottles and were stored at 4° C during transport.

6.	What component of the sample was analyzed, i.e., whole water, dissolved fraction, or suspended particulates?

Whole water.

7.	Please provide the following information on analytical techniques for each class of chemical compounds (please attach a separate sheet).

Analyte	Sample Size	Type and Preparation	Sample Preservation	Holding Time Range	Method	Instrumentation	Detection Limits

Refer to Monitoring Program Annual Report.

8.	Please provide the following information on analytical techniques for each class of chemical compounds (please attach a separate sheet).

Analyte	No. of Samples	No. of Duplicates	No. of Blanks	Matrix Spike Number	Material Used	Amt.	Analytical Standards Number	Material Used

Refer to Monitoring Program Annual Report.

9.	If results submitted to ODES have been corrected for blanks or recovery response, please describe the manner in which this has been done.

Not done.

10.	Please describe any features of this data set which may affect its use to generally characterize environmental data.

The following chemical codes were used for unavailable ODES CHEMCODES:
Code16 = 1,4-Difluorobenzene
Code17 = a,a,a-Trifluorotoluene
Code18 = d10-Phenathrene
Code19 = d12-Chrysene

11.	Please describe the quality assurance/quality control procedures used to verify the correct

coding and entry of data.

CTD data retrieved from device and converted directly to data files. Visual examination of 100% of hand-entered data. Second Individual checked accuracy of 100% of hand-entered data by visual comparision.

12. If any other types of data were collected concurrently which have been or will be added to ODES, please indicate the appropriate ODES file type(s).

009 - Bacteriological Data.

13. In what report or document can the raw data be found? How could an individual obtain a copy of the raw data?

Monitoring Program Annual Report. November 1996 - October 1997. Anchorage Water and Wastewater Utility. Point Woronzof Wastewater Treatment Facility.

DESCRIPTION OF BACTERIOLOGICAL DATA SUBMITTED TO ODES

Data Set ID#:__MOA97BAC.ODS_____ File Type: <u>009</u>

Submitter:___Municipality of Anchorage- Anchorage Water & Wastewater Utility_____

Please give the name of an individual who can be contacted for additional information concerning this data set:

> **Mark Savoie**
> Kinnetic Laboratories, Inc.
> 403 W. 8th Avenue
> Anchorage, Alaska 99501
> (907) 276-6178

1. If you have utilized the Series identification field to define subsets of you data, please provide a description of the code used and its definition. If more than one Series ID was used, provide information for all codes.

   none

2. Please describe the goals and scope of the sampling program.

   Determine compliance with applicable State and Federal water quality standards.

3. Please describe the station distribution. If stations were distributed randomly, regularly, or in some other fashion, please note. If stations were selected in order to characterize some particular feature (e.g., an effluent source) rather than the water body as a whole, please identify this feature.

   Bacterial sampling was performed at intertidal stations near Point Woronzof to determine the suitability of the shoreline water mass for appropriate water uses and the adequacy of the total residual chlorine effluent standard in protecting water quality.

4. Were sampling times chosen in relation to local discharge? If so, were samples taken at peak, slack, or some other discharge period?

   Samples were collected during the flood tide and completed prior to high slack.

5. Did sampling times occur during an unusual event that might affect the interpretation of the data (e.g., a toxic spill, 100-yr storm event, etc.)?

   no

6.   Please describe the sampling gear and techniques used for sample collection. What procedures were included to maintain sterility or prevent contamination?

Samples were collected directly into laboratory specimen containers to avoid any cross-contamination of samples between stations. For thorough description see report.

7.   How were samples transported, and what were the storage conditions and holding times prior to analysis? Were samples pretreated (e.g., addition of dechlorinating or chelating agents)?

Samples were stored at 4 C. See report for further detail.

8.   What microbial taxa were analyzed and what methods were used? If standard techniques, include a reference and describe any modifications.

The Most Probable Number (MPN) technique specified by EPA Microbiological Methods for Monitoring the Environment (1978) was used for fecal coliform analysis. Also used was the EPA procedural guidelines for analysis of enterococci in "improved Membrane Filter Technique for Enumeration of Escherichia coli and Enterococci" (1985).

9.   Please describe the QA/QC steps followed during the bacteriological assays. Examples of possible information to include are procedures for verification of positive samples, measurements of blanks or background, duplicate analyses, replicate field samples, laboratory certification, etc.

Please see report.

10.   Please describe any features of this data set which may affect its use to generally characterize environmental conditions.

none

11.   If any other types of data were collected concurrently which have been or will be added to ODES, please indicate the appropriate ODES filetypes(s).

144W - Receiving Water Quality Data

12.   In what report or document can the raw data be found? How could an individual obtain a copy of the raw data?

Monitoring Program Annual Report. November 1996 - October 1997. Anchorage Water and Wastewater Utility. Point Woronzof Wastewater Treatment Facility.